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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,110	02/10/2004	Joel Christopher Kent	73-7036742001 (ELG059 US1	2668
7590 Tyco Electronics Corporation, MS R20/2B 307 Constitution Drive Menlo Park, CA 94025-1164			EXAMINER PIZIALI, JEFFREY J	
			ART UNIT 2629	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/776,110	KENT ET AL.	
	Examiner	Art Unit	
	Jeff Piziali	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2007 and 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 9,12,13,18,22 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,10,11,14-17,19-21,23-25 and 27 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicants' election without traverse of Species I, Sub-species B, Sub-sub-species 1 (i.e., claims 1-8, 10, 11, 14-17, 19-21, 23-25, and 27) in the reply filed on 4 May 2007 is acknowledged and appreciated.

2. Claims 9, 12, 13, 18, 22, and 26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species/sub-species/sub-sub-species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4 May 2007.

3. Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

4. The listing of references in the specification (e.g., see Page 14, Line 8) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the

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list may not be incorporated into the specification but must be submitted in a separate paper."

Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

5. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification.

Claim Objections

6. Claim 27 is objected to because of the following informalities: the possible claim dependency off withdrawn claim 26 should be removed. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-8, 10, 11, 14-17, 19-21, 23-25, and 27 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. The term "a location proximate" in claims 1, 19, and 23 is a relative term which renders each corresponding claim indefinite. The term "proximate" is not defined by the claim, the

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specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would be unclear to one having ordinary skill in the art precisely what distance must be between the "electrical contact" and the "applied force" (or "touch") before they would qualify as being "proximate" one another. A millimeter? An inch? A foot?

10. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are between "a voltage gradient" (see line 1) and "a voltage gradient" (see lines 2-3). It would be unclear to one having ordinary skill in the art whether the claim is referring to a single, shared, and identical "voltage gradient"; or rather referring to two, independent, and distinct "voltage gradients."

11. The term "flexible glass substrate" in claim 10 is a relative term which renders the claim indefinite. The term "flexible" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. All types of glass inherently exhibit a certain (albeit limited, in most cases) degree of flexibility. It would be unclear to one having ordinary skill in the art what precise degree of flexibility must exhibited by a glass material before it would constitute "flexible glass."

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12. The term "about 200 microns or less" in claim 11 is a relative term which renders the claim indefinite. The term "about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would be unclear to one having ordinary skill in the art precisely what distance range around the 200 micron point qualifies as "about 200 microns." 201 microns? 210 microns? 300 microns?

13. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

One omitted structural cooperative relationship is between "the location" (see claim 20, line 2) and "a location proximate the applied force" (see parent claim 19, line 12). It would be unclear to one having ordinary skill in the art whether the claim is referring to a single, shared, and identical "location"; or rather referring to two, independent, and distinct "locations."

Another omitted structural cooperative relationship is between "a force" (see claim 20, line 2) and "a force" (see parent claim 19, line 10). It would be unclear to one having ordinary skill in the art whether the claim is referring to a single, shared, and identical "force"; or rather referring to two, independent, and distinct "forces."

14. Claim 23 recites the limitation "interior" and "exterior" in lines 2-3. There is insufficient antecedent basis for either limitation in the claim. It would be unclear to one having ordinary skill in the art what structural element forms the basis for having either and "interior" or an

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"exterior." Are the "touch sensor" and "programmable display" interior/exterior the "touchscreen," or rather interior/exterior some other element entirely?

15. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are between "a touch" (see claim 24, line 7) and "the touch" (see parent claim 23, line 5). It would be unclear to one having ordinary skill in the art whether the claim is referring to a single, shared, and identical "touch"; or rather referring to two, independent, and distinct "touches."

16. The remaining pending claims are rejected under 35 U.S.C. 112, second paragraph, as being dependent upon rejected base claims.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. Claims 1, 2, 6, 7, 14-17, 19, 20, 23-25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by *Nishikawa et al (US 5,907,375 A)*.

Regarding claim 1, Nishikawa discloses a touchscreen [Fig. 5; 40], comprising: a substrate [Fig. 5; 52 -- bottom] having a first conductive region [Fig. 5; 53 -- lower part] on a top surface thereof; and a coversheet [Fig. 5; 52 -- top] having a second conductive region [Fig. 5; 53 -- upper part] on a bottom surface thereof, the coversheet bottom surface facing and spaced apart from the substrate top surface, the coversheet further comprising a programmable display [Fig. 5; 41], the coversheet sufficiently flexible that a force applied to the coversheet causes the first and second conductive regions to make electrical contact in a location proximate the applied force (see Column 9, Line 65 - Column 11, Line 35).

Regarding claim 2, Nishikawa discloses the coversheet sufficiently resilient that, in an absence of any force applied to the coversheet, no electrical contact is made between the first and second conductive regions (see Fig. 5; Column 9, Line 65 - Column 11, Line 35).

Regarding claim 6, Nishikawa discloses the programmable display is a video display (see Column 1, Lines 20-31).

Regarding claim 7, Nishikawa discloses the programmable display is an emissive display (see Column 4, Line 65).

Regarding claim 14, Nishikawa discloses the coversheet top surface comprising a substantially transparent protective polymer layer (see Column 11, Lines 10-20).

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Regarding claim 15, Nishikawa discloses the protective polymer layer configured for use as a writing surface (see Column 3, Lines 35-44).

Regarding claim 16, Nishikawa discloses wherein the protective polymer layer is removable (see Fig. 22; Column 16, Lines 1-32).

Regarding claim 17, Nishikawa discloses one or both of the first and second conductive regions comprising an opaque material (see Column 11, Lines 20-35).

Regarding claim 19, this claim is rejected by the reasoning applied in rejecting claim 1; furthermore, Nishikawa discloses a touchscreen [Fig. 5; 40], comprising: a substrate [Fig. 5; 52 - bottom] having a top surface; a coversheet [Fig. 5; 52 -- top] having a bottom surface and a top surface, the coversheet bottom surface facing the substrate top surface; a first conductive coating [Fig. 5; 53 -- lower part] provided on the substrate top surface; a second conductive coating [Fig. 5; 53 -- upper part] provided on the coversheet bottom surface; and a programmable display [Fig. 5; 41] configured to generate images visible from the coversheet top surface, the coversheet sufficiently flexible that a force applied to the coversheet top surface causes the first and second conductive coatings to make electrical contact in a location proximate the applied force (see Column 9, Line 65 - Column 11, Line 35).

Regarding claim 20, Nishikawa discloses control circuitry configured to identify two dimensional coordinates of the location of a force applied to the coversheet (see Column 12, Lines 20-62).

Regarding claim 23, this claim is rejected by the reasoning applied in rejecting claims 1 and 19; furthermore, Nishikawa discloses a touchscreen [Fig. 5; 40], comprising: an interior touch sensor [Fig. 5; 52]; and an exterior programmable display [Fig. 5; 41] positioned in registration with the touch sensor such that, when elements displayed by the display are touched, the touch sensor determines a two-dimensional position of the touch on the display (see Column 9, Line 65 - Column 11, Line 35).

Regarding claim 24, this claim is rejected by the reasoning applied in rejecting claim 1.

Regarding claim 25, this claim is rejected by the reasoning applied in rejecting claim 7.

Regarding claim 27, this claim is rejected by the reasoning applied in rejecting claim 6.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nishikawa et al (US 5,907,375 A)* in view of *Aroyan et al (US 6,163,313 A)*.

Regarding claim 3, Nishikawa does not expressly disclose the details of applying voltage gradients to the conductive regions.

However, Aroyan does disclose a voltage gradient is applied to a first conductive region for a first position coordinate measurement, and a voltage gradient is applied to a second conductive region for a second position coordinate measurement (see Column 1, Line 20 - Column 4, Line 2).

Nishikawa and Aroyan are analogous art, because they are from the shared inventive field of touch screens. Therefore, it would have been obvious to one having ordinary skill of the art to use Aroyan's voltage gradient application techniques with Nishikawa touchscreen, so as to make use of widely accepted position coordinate measurement techniques resulting in reliable operation.

Regarding claim 4, Aroyan discloses a first voltage gradient is applied to the first conductive region for a first position coordinate measurement and a second voltage gradient is applied to the first conductive region for a second position coordinate measurement (see Column 1, Line 20 - Column 4, Line 2).

22. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Nishikawa et al (US 5,907,375 A)* in view of *Aroyan et al (US 6,163,313 A)* as applied to claim 4 above, and further in view of *Kubes et al (US 6,035,180 A)*.

Regarding claim 5, Nishikawa discloses an electroluminescent display panel (see Column 4, Line 65), but does not express disclose diodes connected to the first conductive region.

However, Kubes does disclose an organic light emitting diode type touch screen (see Column 4, Line 23 - Column 5, Line 36).

Nishikawa, Aroyan, and Kubes are analogous art, because they are from the shared inventive field of touch screens. Therefore, it would have been obvious to one having ordinary skill of the art to use Aroyan's voltage gradient application techniques with Nishikawa touchscreen, while also replacing Nishikawa's display with Kubes' organic light emitting diode type display, so as to provide a well known display type substitution resulting in a flexible display being combined with/over the touch sensor.

23. Claims 8, 10, 11, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nishikawa et al (US 5,907,375 A)* in view of *Kubes et al (US 6,035,180 A)*.

Regarding claim 8, Kubes discloses the display comprising one or more organic light-emitting diodes (see Column 4, Line 23 - Column 5, Line 36).

Regarding claim 10, Kubes discloses a coversheet comprising a flexible glass substrate on which the one or more OLEDs are fabricated (see Column 4, Line 64 - Column 5, Line 36).

Regarding claim 11, Nishikawa discloses the substrate having a thickness of about 200 microns or less (see Column 15, Line 25 - Column 16, Line 65).

Regarding claim 21, this claim is rejected by the reasoning applied in rejecting claim 8.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Winans et al (US 2002/0173354 A1), Yamazaki et al (US 7,194,085 B2), Hsu et al (US 7,030,860 B1), Cok et al (US 6,885,157 B1), Aufderheide et al (US 6,555,235 B1), Colgan et al (US 6,483,498 B1), Feldman (US 6,424,094 B1), Colgan et al (US 6,204,897 B1), and Aufderheide et al (US 6,034,335 A) are cited to further evidence the state of the art pertaining to touchscreens.

25. Please note: The prior art specification section(s), drawing(s), and reference character(s) referenced above in correlation with instantly claimed subject matter are simply illustrative as examples of how the cited prior art document(s) read on the instant invention. These examples

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are merely provided as a courtesy for the applicants to better follow the examiner's reasoning.

The actual ground(s) of rejection are not limited to these examples alone.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jeff Piziali
20 July 2007